

Furthermore, it is difficult to understand how "Quadrate bone articulating with paroccipital" can be given as a diagnostic character of the Ophidia, when we remember that the supratemporal [paroccipital, Cope] is absent in three families of that suborder (Typhlopidae, Stenostomatidae, Uropeltidae), where the quadrate articulates with the prootic or with the prootic and the exoccipital.

In stating that "Johannes Müller first placed the distinction on a sound basis by showing that in the Ophidia the frontal and parietal bones descend to the basicranial axis as in no other vertebrates," Prof. Cope appears to ignore that such an arrangement is not universal in Snakes, since in some (e. g. *Psammophis*) the frontals do not descend, and are widely separated from the sphenoid in front of the parietals, which do not actually close the brain-case in front. That some Lacertilia agree with the Ophidia in the downward extent of the parietals the author himself admits; and as the teeth of a slow-worm are as much devoid of "dentinal roots" as those of a snake, it may be asked, What remains of Prof. Cope's new definition of the suborders of the Squamata?

L. — *Descriptions of Four small Mammals from South America, including one belonging to the peculiar Marsupial Genus "Hyracodon," Tomes.* By OLDFIELD THOMAS.

CÆNOLESTES\*, nom. nov.

*Hyracodon*, Tomes, P. Z. S. 1863, p. 50; *nec* Leidy, Proc. Ac. Philad. viii. p. 91 (1856).

Type: *C. fuliginosus*, Tomes, *l. c.*

*Cænolestes obscurus*, sp. n.

Very much as described in *C. fuliginosus*, but double the size.

Rather smaller than *Mus rattus*. Fur soft, thick and close. General colour uniform brown (approximately bistre-brown of Ridgway) all over, rather darker along the median line of the back; but otherwise there are no variations or markings

\* *καινός*, modern; *ληστής*, a pirate or other predatory person. The affix "-lestes" is connected in mammalogy with small and ancient fossil marsupials, e. g. *Microlestes*, *Amphilestes*, &c., so that the above name may be considered to represent an existing animal with ancient fossil relatives. The question whether this should be "-lestes" or "-leistes" has been carefully considered and submitted to classical authorities, by whom I am informed that as the iota subscript in *ληστής* would not have been pronounced at all, the proper transliteration is as above.

anywhere. Under surface little paler than back. Ears short, practically naked, brown. Hands and feet brown. Tail about the length of the head and body, slender, very finely haired, the terminal part naked below.

Dimensions of the type (a male in skin) :—

Head and body 151 millim. ; tail 144 ; hind foot (moistened) 23 ; ear (moistened)  $12 \times 11.5$  ; heel to end of hallux 14.2 ; hallux 3.2.

Skull : basal length 33.5 ; greatest breadth 18 ; nasals, length 17.8 ; intertemporal breadth 7 ; palate length from gnathion 20.7 ; length of palatine foramina 6.2 ; combined lengths of  $\frac{m.1-3}{i.1}$  5.1. Lower jaw : tip of  $\frac{i.1}{i.1}$  to condyle 28.5.

*Hab.* Bogota. Coll. by G. D. Child, May 7, 1895.

Tomes's "*Hyracodon*" *fuliginosus* was said to be of the size of a water-shrew (P. Z. S. 1860, p. 213), and the measures given in its fuller description in 1863 show that this comparison was not incorrect, while his account of the teeth gives no indication that his example was young. The specific distinction of the Bogota form seems therefore clear.

The rediscovery of this long-lost genus, whose wide distinction from all other living marsupials its original describer does not appear to have at all fully appreciated, is one of the most interesting events in mammalogy that has happened for many years. A full description of the animal, its skull and dentition, will be given elsewhere ; but it may be here briefly stated (1) that *Cænolestes* represents among the marsupials a family, and, perhaps, a suborder, entirely different from any other now living ; and (2) that it is closely related to, and evidently a surviving representative of, some of the fossil marsupials from the Santa Cruz beds of Patagonia. In fact it seems undoubtedly to fall into the family Epanorthidæ of the suborder Paucituberculata, both groups founded by Señor F. Ameghino. The beds from which the fossil Epanorthidæ were obtained have been said by Mr. Lydekker, to whom I am indebted for assistance in tracing the relationships of *Cænolestes*, to be of Upper Oligocene or early Miocene age, while Señor Ameghino considers them to be Eocene.

Apart from this, the survival to the present day of a member of so ancient a group, otherwise wholly extinct, is a fact of the utmost interest, and one whose discovery will be welcomed by every zoologist.

*Oryzomys instans*, sp. n.

A middle-sized *Oryzomys* with forwardly projected incisors. Fur soft and straight, about 8 millim. long on the middle

of the back, apparently nearly entirely composed of wool-hairs, but with a few longer hairs intermixed. Colour uniform dark slaty grey, the hairs being almost wholly of this colour, but with their *extreme* tips whitish grey. Ears of medium size, naked, grey. Under surface quite like back. Hands and feet brown; fifth hind toe reaching to the base of the second phalanx of the fourth. Tail long, slender, thinly haired, uniformly brown.

Skull delicate, with a large rounded brain-case and small slender muzzle. Nasals narrow, evenly converging backwards. Interorbital space smooth, its edges just showing a trace of squareness. Upper incisors unusually thrown forwards, so that in a vertical view of the skull they are clearly visible in front of the nasals; no part of their profile, even at their tips, slanting backwards towards the mouth, as is usually the case. Lower incisors long and very slender. Palatal foramina very short, not nearly reaching to the level of m.1. Molars of the squarish form typical of *Oryzomys*.

Measurements of the type (in skin):—

Head and body 99 millim.; tail 130; hind foot (moistened) 22·7; ear (moistened) 14·1.

Skull: basal length 21; basilar length 19·8; basion to tip of nasals 21·2; basion to tip of incisors 21·3; greatest breadth 13·6; nasals 8·6 × 2·7; interorbital breadth 4·6; interparietal 3 × 7; anterior zygoma-root 2·2; diastema 7·1; palatal foramina 3·5 × 1·9; length of upper molar series 3·7.

*Hab.* Bogota. Coll. G. D. Child.

This remarkable species is only placed provisionally in *Oryzomys*, and may hereafter prove to represent a peculiar group. It is distinguished from all others by its forwardly projecting incisors, rounded supraorbital edges, and short palatine foramina.

*Acodon bogotensis*, sp. n.

Intermediate in size between *A. caliginosus* and *A. teguina*, both of which it resembles in its uniformly finely grizzled blackish-brown colour. Ears of medium size, black. Limbs and tail dark brown. Belly scarcely lighter than back. Fifth hind toe reaching to the end of the first phalanx of the fourth.

Skull with a narrow muzzle and broad interorbital region, whose edges are almost square, not rounded. Palatine foramina reaching just to the front edge of m.1. Outer wall of anteorbital foramina unusually short. Molars small in proportion to the general size.

Dimensions of the type (an old individual, in skin) :—

Head and body 91 millim. ; tail 70 ; hind foot (moistened) 19·2 ; ear (moistened) 13·2.

Skull: basal length 20 ; basilar length 18·5 ; greatest breadth 12·4 ; nasals  $9·7 \times 2·6$  ; interorbital breadth 4·8 ; interparietal  $6·4 \times 1·6$  ; breadth of zygomatic plate 1·4, diastema 6 ; palatal foramina 4·3 ; length of upper molar series 3·5.

*Hab.* Plains of Bogota. Coll. by G. D. Child, May 20, 1895.

*A. bogotensis* is distinguished from the first species above named by its smaller, and from the second by its larger size, the hind feet of old specimens of the three species being approximately as follows:—16–17, 19, and 22–23 millim. Its dark colour separates it from any other species known to me. In the unusually slender lower portion of its anterior zygoma-root it also seems to differ from all its allies.

*Acodon hirtus*, sp. n.

General external appearance very much as in *A. longipilis*, Waterh., with which the specimens have hitherto been confounded. Fur shorter, coarser, and shaggier. General colour paler, especially on the sides and under surface, on which latter the tips of the hairs are almost white. Ears short, hairy, scarcely projecting beyond the fur. Hands and feet white ; fifth hind toe reaching to the middle of the first phalanx of the fourth. Tail markedly bicolor, dark brown above, white below.

Skull with the general character of that of *A. longipilis*, but the muzzle is not elongated in the same striking way, a difference which at once distinguishes the species. Interorbital region smoothly rounded.

Dimensions of the type (an adult skin) :—

Head and body 113 millim. ; tail 84 ; hind foot (moistened) 23 ; ear (moistened) 12.

Skull: basal length 24·5 ; basilar length 22·5 ; greatest breadth 14 ; interorbital breadth 5 ; diastema 7·5 ; palatal foramina 6·3 ; upper molar series 4.

*Hab.* Fort San Rafael, Mendoza. Coll. T. Bridges.

*Type*: B.M. 60.1.5.15. Presented by G. R. Waterhouse, Esq.

This species is evidently the representative of the Chilian *A. longipilis* on the eastern side of the Andes, just as *A. macronyx* is of *A. megalonyx*.